

Figure 1

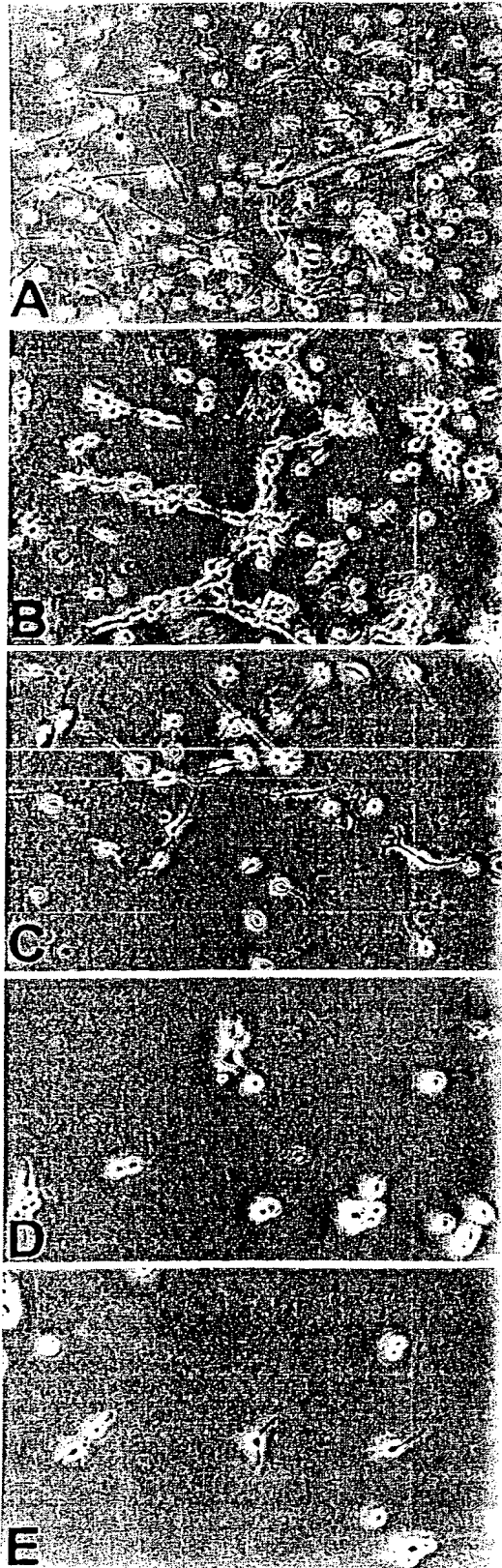


Figure 2

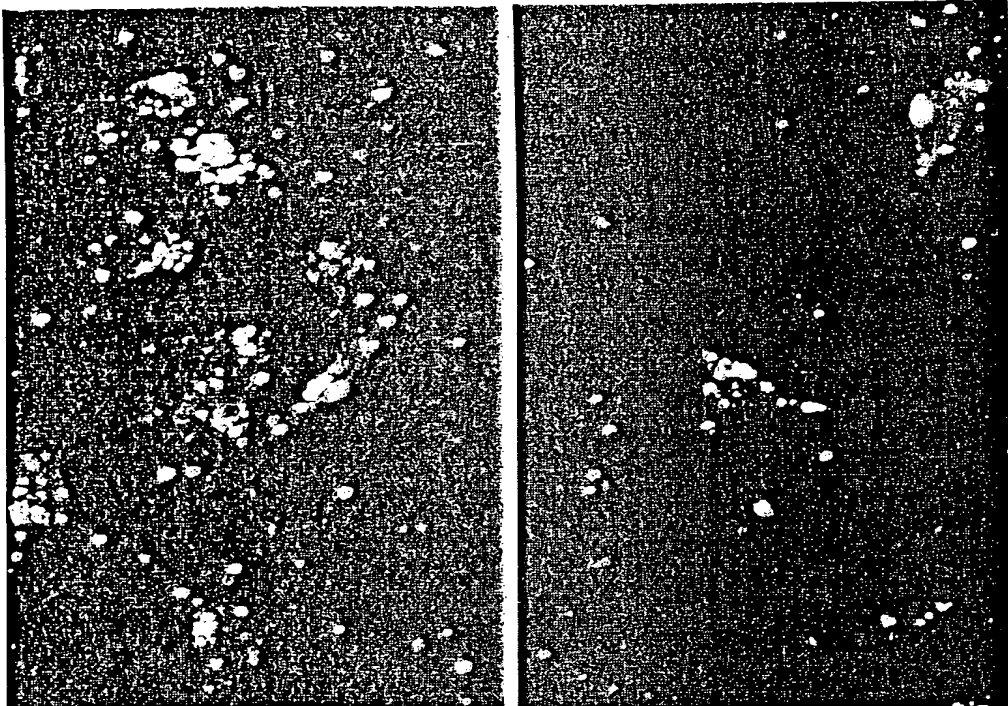


Figure 3

Figure 4-A

NM001975, mRNA

1 accgcgcctc gtacgtgcgc ctccgccggc agctcctgac tcatcggggg ctccgggtca
 61 catgcgcccg cgcggcccta taggcgcctc ctccgccgc cgcggggag ccgcagccgc
 121 cgcggccact gccactcccg ctctctcagc gccgccgtcg ccaccgccac cgcaccgcc
 181 actaccaccg tctgagtctg cagtcccag atccagcca tcatgtccat agagaagatc
 241 tgggcccggg agatcctgga ctccgcggg aacccacag tggagggtga tctctatac
 301 gccaaaggtc tttccgggc tgcagtgcc agtggagcct ctacgggcat ctataggcc
 361 ctggagctga gggatggaga caaacagcgt tacttaggca aaggtgtcct gaaggcagt
 421 gaccacatca actccacat cgcgccagcc ctcatcagct caggctcttc tgtgtggag
 481 caagagaaac tggacaacct gatgctggg ttggatggga ctgagaacaa atccaagtt
 541 ggggccaatg ccatcctggg tgtgtcttg gccgtgtga aggcagggg agctgagcgg
 601 gaactgccc tgtatgccca cattgtcag ctggccggga actcagacct catcctgcct
 661 gtgccggcct tcaacgtgat caatggggc tctcatgctg gcaacaagct ggccatgcag
 721 gagttcatga tctcccagt gggagctgag agctttcgg atgcatgcg actaggtgca
 781 gaggtctacc atacactcaa gggagtcata aaggacaaat acggcaagga tgccaccaat
 841 gtgggggatg aaggtggctt tgcaccaat atcctggaga acagtgaagc ctggagctg
 901 gtgaaggaag ccatcgacaa ggctggctac acggaaaaga tcgttattgg catggatgt
 961 gctgcctcag agttttatc gtatggcaaa tatgacttg acttcaagtc tccactgat
 1021 ccttcccgat acatcactgg ggaccagctg ggggcactct accaggactt tgcaggggc
 1081 tatctgttg tctcattga ggaccattt gaccaggatg attgggctgc ctggtccaag
 1141 ttcacagcca atgtaggat ccagattgtg ggtgatgacc tgacagtgc caacccaaaa
 1201 cgtattgagc gggcagtga agaaaaggcc tgcaactgtc tgctgtcaa ggtcaaccag
 1261 atcggctcgg tcatgaagc catccaagcg tgcaagctgg cccaggagaa tggctggggg
 1321 gtcatgtga gtcatgcctc aggagagact gaggacacat tcatgtctga cctgggtgtg
 1381 gggctgtgca caggccagat caagactgg gcccgtgcc gttctgaacg tctggctaaa
 1441 tacaaccagc tcatgagaat tgaggaagag ctgggggatg aagctcgtt tgccggacat
 1501 aacttccgta atccagtg tctgtgattc ctctgcttc ctggagacgt ggaacctctg
 1561 tctcatctc ctggaacctt gctgtcctga tctgtgatag ttcacccct gagatccct
 1621 gagccccagg gtgccagaa ctccctgat tgacctgctc cgctgctct tggcttacct
 1681 gacctctgc tgtctctc cgcctcctt tctgtccct actcattgg gttccgcact
 1741 ttccactct tcttctct tctctctc ctcagaaac tagaatgtg aatgaggat
 1801 attataaaag ggggtccgtg gaagaatgat cagcatctgt gatgggagcg tcagggttg
 1861 tgtgtgagg tgttagagag ggaccatgtg tcaattgtc ttgctctg tccacgtgt
 1921 ctccacttt gcatatgagc cgtgaactgt gcatagtgt gggatggagg ggagtgttg
 1981 gcatgtgatc acgcctggct aataaggctt tagtgtattt atttatttatt tttttatt

Figure 4-B

2041 tgttttcat tcatccatt aatcattcc ccataactca atggcctaaa actggcctga
2101 ctgggggaa cgatgtgtct gtattcatg tggctgtaga tccaagatg actggggtgg
2161 gaggtcttgc tagaatggga agggcatag aaagggcctt gacatcagtt cctttgtgtg
2221 tactcactga agcctgcgtt ggtccagagc ggaggctgtg tgctggggg agtttctc
2281 tatacatctc tcccaaccc taggttccct gttcttctc cagctgcacc agagcaacct
2341 ctactcccc atgccacgtt ccacagttgc caccacctct gtggcattga aatgagcacc
2401 tccattaaag tctgaatcag tgc

Figure 5-A

X51956 Human, DNA

1 ctgcagggga aagttggtgg tgtatgcagc tggacctagg agagaagcag gagaggaaga
 61 tccagcacia aaaatctgaa gctaaaaaca ggacacagag atgggggaag aaaagagggc
 121 agagtgaggc aaaaagagac tgaagagatg aggggtggccg ccaggcactt tagatagggg
 181 agaggcttta ttacctctg ttgttttt tttttttt tttttttt ttttgcgag
 241 gtagtcttgc ttagtctcca ggctggagtg cagtggcaca atctcagctc actgcaact
 301 ccacctctg ggtcaagca attctctgc ctcagcctcc cgagtagctg ggactacagg
 361 cgcatgcaac cgcgcctggc taattttgt attttagta gaaacggggg ttcaccacgt
 421 tagccaggat ggtctggatc tctgacctc gtgatctgcc cgctccgcc ttccaaagtg
 481 ctggattaca ggggtgagcc acagcgcctg gtccctattt acttctgtct tctacctcca
 541 ggagatcaaa gacgtggcc ttcacacctg atcagactcc caggggcagc caccacatgt
 601 atgacagaga acagaggatg cctgttttc ccaaagctg gaaattcatc acaacctgag
 661 gccaggatc tgctctgtc cgttctctg ggcagtgtgg ggtgcagaat ggggtgccta
 721 ggctgagcg ttgcctggag cctaggccgg gggccgccct cgggcaggcg tgggtgagag
 781 ccaagaccgc gtgggcccgc ggggtgctgt aggagtgggt ggagagactt gcgaaggcgg
 841 ctggggtgtt cggatttcca ataaagaaac agagtgatgc tctgtgtct gaccgggtt
 901 gtgagacatt gaggctgtct tgggcttcac tggcagtgtg ggccttcgta cccgggctac
 961 aggggtgcgg ctctgcctgt tactgtcgag tgggtcgggc cgtgggtatg agcgttgtg
 1021 tgcgtgagg ccaggctgtg ggtgccccca ccttcccc atctctctcc ctccccact
 1081 ccacctctgt cgttccccca ccgcgcctcg tactgtcgcc tccgcccga gctctgact
 1141 catcgggggc tccgggtcac atgcgccgc gcggccctat aggcgcctcc tccgcccgc
 1201 gcccgggagc cgcagccgcc gccgccactg cactccccgc tctctcagcg ccgcccgcg
 1261 caccgccacc gccaccgcca ctaccacctg ctgagtctgc agtcccagg tgaagcccc
 1321 gccaggccca gagcccctgt gggcccctcc ctccgccgc gcgcccctgc ctcttacc
 1381 cgggtccgct gcgcacctct ccgcatctct ggcccgggtc agctgcgcac ctgctccgc
 1441 gccgcgccc agggcgctt ccttccctgg ccttccccgc ccgtgcctt cgtttctg
 1501 cctctgcgc gcctatctct aactgcgcct ctccaccctt gcctgcctct ctccgggtc
 1561 tcgcccctat ctacgtctat tgttctaagt tggacgtctc cggcgtgcat ttatcttag
 1621 agcgtccctt ttggttgca ttgggaaat gtcttctc accgttctc acctcccca
 1681 gacttccctt gactccctc tctctgcic tccccacgg cggccctctc cgttcgcgt
 1741 tctccccctc tctgcacgg gggagagatg gaagaagtgg ggtctgtcg aggcgcagag
 1801 gggaggacag gccagctcg cctccactcc ccaccggctc ttactctt cacttccgc
 1861 tgcaaccccc agggactgca gggccttct caggaccctc tccccgaca cctgtattgc
 1921 atgcgcctt cgcgggaaga ggaggatc acgttggga gagagtggga ccttgggaa
 1981 ggggcagtgt tcaggcagct ggggtgttaa gttggggagg tatgggggt ctggaagaga

Figure 5-B

2041 ggcccaggca gcccatctc ttcttggtc ccaggagaaa tgcaagcctg gcagccattc
 2101 cgctctgagg agatctggga acccaccggc tggccaagct gcaaagaggc gcgggaacat
 2161 gtcgtgccct cctctctcac tgcaagtgtc tccatctcat catttgatct taccgccccg
 2221 ggactgcagt gacctccct tctcactgc attgacctc tctcttcca ggggggaggg
 2281 ggaatccctt ctacagccct agactgcagc cagcgctcc ctacccacc cccaccact
 2341 gcagtaacct cttcccatc cctccagcc tccgccccg ccattgatc tcaggctcca
 2401 cccctctaag cctctatct ttctctcc ttccctcca cccgaggaga tccagccat
 2461 catgtccata gagaagatct gggcccgga gatctggac tccgcgga acccacagt
 2521 ggaggtggat ctctatactg ccaaaggtaa tgggtgtggc atgggcttc ctacagccct
 2581 agctttcca cggccaggct ggggtcggc aggggtcgg aggcctttt tgataccag
 2641 gggatgggg tgctggcca ggctcacaag cctgggtgt ggcggtgga tctcttgt
 2701 ccgggagcca gggtaggtg gtcgtgtc gagtttagc tgtagcatg tctgctcc
 2761 gtgtgtctg ctgtgactt gcatgtgtc agacgtgtc tgcaagcaat ttctttctg
 2821 cgggctcca ctgtgcatg tggggctca gatgggtgga tgaggaggcc acttctgtg
 2881 catctgctc agtgtgtgtg tgggtgggg gtgggggat gtagggagc agtgtggga
 2941 gagagctaga tgtgttagc aggcagtta gagccagaag gctgaaggac tccctggccc
 3001 ctgttctc ttactccct ctattccat gttctctt taggtcttt ccgggctga
 3061 gtccccagt gagcctctc gggcatctat gaggccctg agctgagga tggagacaaa
 3121 cagcgttact taggcaaagg tgaggtccct tcttttcc agactctcc ccacctcagc
 3181 ctatgcccc tactcacac cagtcaccag tctctcta gcatggctc cctctccc
 3241 attgatccct tccgcccctc ctggcccgac ccagtcagc ctctcttt cccaggtgt
 3301 cctgaaggca gtggaccaca tcaactccac catcgcgcca gccctatca gtcagttag
 3361 gcctgtctt tgctgggat agcagggcca gattctgga aggaatccc gagcaggga
 3421 ggaggaaggg aagaaagaag gccactctt aggaatcatg gttacaaggg ggaaggtgg
 3481 ggaacagct cctaatgca cctgtctcc atgggagttc aggtccccta atccaggtag
 3541 gccctgtca cagggacctg gttggacct ggccaatgt gagctgggt gtgaatgagg
 3601 ggacctctg ccttaggtc agcctccagc ctggccctg gtgatggagc tctgccctca
 3661 gggctctct gtgtggagc aagagaaact ggacaacctg atgtggagt tggatgggac
 3721 tgagaacaaa tgtagccgg gccggagaaa gtgggaagcg tcagggtggg gaggcgtgga
 3781 gcagatagag agctgaaggg ccagtgtgt agtggcttc tcaggaatga ctgtcaggg
 3841 cattctctc tcaaagccag agcaagggga gatgagttt gctgcagagg gaaggaccga
 3901 cagtaggcag aaggaagacc ttcttgtag catacagagg aggggatgg cctgagagag
 3961 tctgtgtct caggatatt tagaaagagg tgtggctctc tgccgttcc aatctctcc
 4021 tccccacca ttctctccc tgctgttcc aagagagcat gtaggaggt ttgtggggc
 4081 aggggtggg agggaggagg ggtctcct tactggctcc ttgtggagac tacagatgga
 4141 ggcaggagct agaaaggaga aggggacatt tggctcagca cttctcta taatctcta

Figure 5-C

4201 gccaaagtttg gggccaatgc catcctgggt gtgtctctgg ccgtgtgtaa ggcaggggca
 4261 gctgagcggg aactgccct gtatgccac attgctcagc tggccgggaa ctacagacct
 4321 atcctgcctg tgccggtgag caataagcca cggtgaggct ctcccagggg cgggtggggg
 4381 agggagcatg caactcatga ggaatgatgg gaggaagtg aattgagggg ggtaaagagg
 4441 aaggatgggg acgtgagact tagtccggaa agctggggga agttgggat ctgggttaa
 4501 cactcctggg gcgggcaggg aggggctctt tgaccctct gtcttctgt ggctccccag
 4561 gcctcaacg tgatcaatgg tggctctcat gctggcaaca agctggccat gcaggagttc
 4621 atgactctcc cagtgggagc tgagagcttt cgggatgcca tgcgactagg tgcagaggtc
 4681 taccatacac tcaagggagt catcaaggac aaatacggca aggatgccac caatgtgggg
 4741 gatgaagggt gcttgcccc caatacctg gagaacagtg aaggtagggc caggagcccc
 4801 actcccagcg tgctaagtct taccctattg tgggacatca gaaaggggta cacagttcac
 4861 caagtcctga gtaggcgtgg agggctctag gactctgcaa actccaaaag gtaccagttc
 4921 ttagagtggg ttgcagagag cctgccaaat tcacatgcag acctaggggg acagtatttt
 4981 tttttttt tgagacggag tctgtctctg tcaccaggc tggagtgcag tggctcgatc
 5041 tcagctcact gcaacgtccg cctccgggt tcacgccatt ctctgcctc agcctccga
 5101 gtagctggga ctacaggcg cgcaccac tcccggctaa tttttgtat ttttagtag
 5161 agacaggggt tcactgtggt ctgaactcc tgacctgtg atcgcccg ctcggcctcc
 5221 caaagtgtg ggattacaag cgtgagccac cagcctggc caggggacag tctttacct
 5281 gcctagccag atgtgttagc atctgtaag ttgccactgg aaggccgggc gcggtggctc
 5341 acacctgtaa tccagcact ttgggaggct gaggcgggtg gatcacctga ggtcaggagt
 5401 ttgagaccag cctggccaac aaggtagaac cccgtctcta ctaaaaatac aaaaattagc
 5461 cgggcatggt ggcgtgtgcc tgaatcaca gatactagcg gggctgaggc aggaggatcg
 5521 ctgtaccg ggaggcggg gttgtgtga gccgagatca tgccactgca ctccagcctg
 5581 ggcaacagag cgagctccgt ctcaaaaaa aaaaaaaaaa aaaaagttgt cactggagcc
 5641 ctgggaata ctgggagatg gtctggatga cctgtggat tcatccatc ccattcgaaa
 5701 tctgtctgt cccgtccca acctctagg cctctagaat ccctaatttt tctgtcctt
 5761 gggggaaact gtataggga tggaaagaat ataggtagt gttaagagtt aaggttctgg
 5821 ggccaataa cctggattta ttgaacctt gactgtgga gttactgtg tgaacttc
 5881 ttactctct ctggaaataa taacagaatc tagctcatg tagtgtagg cttaaatgaa
 5941 atatatataa aatgcttaga tgacatgata ccaatgaaag tatagtaagt attattaaga
 6001 gaattccatt cctctgtgt cctagaagat ggcctctct ccagacctgg gataaccca
 6061 acagcatccc cgccacactt ccctcaggaa cagacctcca cctctgccct gaatgtctt
 6121 tctttccct cctcctctg cccatccct ctgctgtac tataatctca ctgtattctg
 6181 tcccagcct tggagctgt gaaggaagcc atcgacaagg ctggctacac ggaaaagatc
 6241 gttattggca tggatgtgc tgcctcagag tttaactgt atggcaaata tgactggac
 6301 tcaagtctc ccactgatcc ttccgatac atcactgggg accagctggg ggcactctac

Figure 5-D

6361 caggactttg tcagggacta tctggtgag aggaagtggg gtgaggggga ggtctggggg
 6421 caggcagga cgtgtcccag caactctgga ccttatgggg tgctgactca ggcaccaggt
 6481 gggggtgtcc taagaagaac ctgagaacca gggagagggt gcaggagcca cctgcaaaga
 6541 ctgggctttg tatgtagtgt aaaaaatgca ggtacccgtg accaatctgt tctgtctcag
 6601 atcttgatta aagtcattgg ttctgaaaac tactggggtc atggggaagg ctctggaagg
 6661 aaccagggat gatattgagt tgactggatc tagcagagaa ctagaacatt tcagtatctt
 6721 tgattgatga aattgtggat gctgaatgga gctgggactg atgtgtagt agaaagaagg
 6781 ctgaggggga ctgaattagc ttctgcaagt ctgccagggt cctttatctc aggatggagg
 6841 cagttggctg ccatcttctt gacacagagc gaaagaaaa caacataatt gcagaattaa
 6901 ggatttgat tagcaatgag gaagggcttg ctggcagtga gaacaggaaa atgcaaagct
 6961 aggtgtgaa ccctgttac tggaagattt ttttggggg gggggtggg tttttttt
 7021 tttttgtt tttttttt agacagagt ttactcttct tgcccagggt ggagtgaat
 7081 ggcgccatct cggctcacca caacctccac tcccggattc aagcgattct tctgcctcag
 7141 cctcccgaat agctgggatt acagcatgtg ccacatgcc tggctaattt tttattttta
 7201 gtagagacag ggttttctc atgttggtca ggctggctc caactcctga cctcaggtaa
 7261 tctatccacc ttggtctccc aaagtgtctg gattacagcg tgagccacca cgcctggctg
 7321 gtttgcttt aattaacttt tttttttt tttttttt gtagagacag ggtttacat
 7381 gttgctcatg getggtctca aaetaactgg ctcaagtgt ctgcattgct cggcctccca
 7441 aagtgtggg attacaggca tgagccactg tgcccagcct atggaagtgg cgtgagatct
 7501 ctgtcactg cagattctc ttgacctccc aagtagctgg gattacaggc gtgcaccacc
 7561 atgcctgcta attttgtat ttttagtata gatggggtt tactatgta gccagggaac
 7621 tctatctc aagtgtacc ttacctcag tatcccaaag tgctgggatt acaggcatga
 7681 gccactgtgc ctggcctctc catgtaaggt ttatgaaat aagaatcagg agccaggcgt
 7741 ggtgtcatg cctglaatcc cattacttg ggaagccgag gcaggaggac tgcttgaatc
 7801 caggagttcg agactggcct ggcaatacag tgagacctca tcttataaaa aattttaaaa
 7861 attagctgag tgtggtgcca cacacctaaa gtccctgcta ctcaggaggc tgagggtgga
 7921 ggatcacttg attggggagg tggagggtgc agtgagctga gattgtgcca ctgcactcca
 7981 gcctggatga cagaatgagg ctctgtcaaa aaaaaaaaaa aagttaagaa tcagttaggg
 8041 caggcttaca ctggggggat ttgtcttagc aaggatgagc aggtgtagt aaccaagggc
 8101 ctgtccattt cagggaataa aggggcattg tctgcctga ttagagacc cagggaagat
 8161 gaacacctcc cccctccca ccatgtctc tctgcagtgg tctccattga ggacctatt
 8221 gaccaggatg attgggctgc ctggtccaag ttacagcca atgtaggat ccagattgtg
 8281 ggtgatgacc tgacagtac caacccaaaa cgtattgagc gggcagtgga agaaaaggcc
 8341 tgcaactgic tgctgtcaa ggtcaaccag atcggtcgg tcaactgaag catccaagcg
 8401 tgagtactt ctggccctct cctgtgtgt cctgtttct ataagactcc tttgcaagt
 8461 gctccagcct aattctacc aggggtgcca aagagagcgg ggaacctgga atcatcctca

Figure 5-E

8521 cagttctctc acctctgcc ctccaccct gattctctgc tcccctccca gatagcttc
 8581 ccctagatgt ttctgacat agaccaaggt tgggctggg aagagagtgc ccagtgtgag
 8641 agctggagaa tcagtgtgt gtgtggatac aggtgcaagc tggcccagga gaatggctgg
 8701 ggggtcatgg tgagtcacg ctccaggagag actgaggaca cattcattgc tgacctggg
 8761 gtggggctgt gcacaggcca ggtgagttag gcagcctggg gagtgaagag aactctctgt
 8821 gggattggtt ttctagctc acccacctgg tctctcctc cagggtgttg aggggtgcag
 8881 gggagtttca ggagagcaga agtttcctt caggggtgag agggcagtc ctgagctgca
 8941 aatcctttga aatgtttcag atcaagactg gtgccccgtg ccgttctgaa cgtctggcta
 9001 aatacaacca gctcatgagg tgagggtccc tgggtggga gccctggcc cagatggcta
 9061 aaggcccat ttgctgcca gaccatctgt agcaccaagg gcctggataa cagtccattt
 9121 cctggataac agtccaacag ataatttgg ttttgcctc ctgggtttat tgatggcctg
 9181 attgacaaat cccagagatc acatgggaaa gccagggaat gctaagcctt ggggcaggac
 9241 acaaaagcag gtgtgtggg ggtggttga gtctggggga cccctagaga gagaagcagg
 9301 atctcctgc atccctgacc acttctttg tggttcatc ctctcagaat tgaggaagag
 9361 ctgggggatg aagctcgctt tgccggacat aactccgta atcccagtgt gctgtgattc
 9421 ctctgctgc ctggagacgt ggaacctctg tctcatctc ctggaacctt gctgtctga
 9481 tctgtatag ttacccccct gagatccct gagccccagg gtgcccagaa ctccctgat
 9541 tgacctgctc cgctgctct tggcttacct gacctctgc tgtctctgt cgcctcctt
 9601 tctgtccct actcattggg gtccgcact ttccactct tctttctct ttctcttc
 9661 cctcagaaac tagaaatgtg aatgaggatt attataaaag ggggtccgtg gaagaatgat
 9721 cagcatctgt gatgggagcg tcagggttg gtgtctgagg tgttagagag ggaccatgtg
 9781 tacttgtgc ttgtcttg tccacgtgt ctccacttt gcatatgagc cgtgaactgt
 9841 gcatagtgt gggatggagg ggagtgttg gcatgtgac acgcctggct aataaggctt
 9901 tagtgtatt attatttat ttatttat tgttttcat tcatccatt aatcatttc
 9961 ccataactca atggcctaaa actggcctga ctgggggaa cgatgtgtct gtattcatg
 10021 tggctgtaga tccaagatg actggggtg gaggtctgc tagaatggga agggcatag
 10081 aaaggccctt gacatcagtt ctttgttg tactactga agcctgcgtt ggtccagagc
 10141 ggaggctgtg tgctggggg agtttctc tatacatct tcccaacct taggttcct
 10201 gttctctc cagctgcacc agagcaacct ctactccc atgccagtt ccacagttg
 10261 caccacctct gtggcattga aatgagcacc tccattaaag tctgaatcag tgcactgtg
 10321 tgfctaagga gtctactct agtcctatg aggggagaga agatggagca cctggaagct
 10381 ggtgaaactg gatagcagag ctggggggg acaaaaagag gaagacaaac tgaacaaata
 10441 tggccgagat gatggcactg cctacccat tctggctagg tgggtgcat gtggcccctg
 10501 cttcttagc agaaggctg gctccagac gcaggtgaat taaggggttc aagagcccct
 10561 aaaagcataa aatattttgt gtgtgtgt gtgtgcacgc gcattttgg ggaaagggg
 10621 tctaagggtt ttcatatcc aaagggctg tgactggag cagctctgt actgggcctc

Figure 5-F

10681 tgccaacaaa accctggctg gttctcgaat ggaacaggac ttcatggcca tcaccactg
10741 caagatgggg aaatgggaag gaagaatggt tccgggggta gtatacgga ggacctaagg
10801 aaacagagtc ctcaataaac tgaagattca ggaacaaaag tgcttaacag aaccctggct
10861 gggtcagact aacagtaggt ttccaatatg tggctagaga cgtac

Figure 6-A

M11931 Rat brain mRNA complete cds

1 cgccgcccgc gtcaccaccg ccaccgccac cggctgagtc tgcagtcctc gaggagatcc
 61 cagccatcat gtctatacag aagatctggg cccgagagat ctggactcc cgtgggaatc
 121 ccaccgtgga ggtggatctc catactgcc aaggtctttt ccgggctgca gtccccagt
 181 gggcctccac tggcatctat gaggccctgg agctaaggga tggggacaaa cagcgttact
 241 taggcaaagg tgtctgaag gctgtggacc acatcaacag caccatcgca ccggccctca
 301 tcagctcagg cctctctgtg gtggagcagg agaagctgga caacctgatg ctggagtgg
 361 atgggactga gaacaaatcc aagtttgggg ccaatgccat cctgggtgtg tccctggccg
 421 tgtgcaaggc tggggcagcc gagaaggact tggccctcta tcgccacatt gctcaactgg
 481 ctgggaactc cgacctatc ctgccgtgc cggcctttaa tggatcaac ggtggctctc
 541 atgtgggaa caagtggcc atgcaggagt tcatgatcct ccagtggtg gctgagagct
 601 ttcgggatgc catgcgactt ggggcccagg tgtaccacac actcaagggg gtcatcaagg
 661 acaaglacgg caaggatgcc actaatgtgg gggatgaagg cggctttgcc ccaatatcc
 721 tggagaacag cgaagcttg gagctggtga aggaagccat tgacaaggct ggctacacgg
 781 aaaagatggt gattggtatg gatgtggctg cctctgagtt ttaccgcat ggcaaatacg
 841 acttggattt caagtctct gctgacctt cccgatgcat cactggggac cagcttgggg
 901 cactctacca ggactttgc cgaactatc ctgtggtctc cattgaagac ccattcgacc
 961 aggatgactg ggcagcttg tccaagtta cagccaatgt cggcatccag atagtgggtg
 1021 atgacctgac ggtgaccaac cccaagcgca tcgagcgggc agtgaggag aaggcctgca
 1081 actgtttgct gctcaaggtc aaccagatcg gtcagtcac agaagccatc caagcgtgca
 1141 agctggccca ggagaacggc tgggggggta tggtagtca tcgctctgga gaaaccgagg
 1201 acacgttcat tgcagacctc gtagtgggac tgtgtacagg tcagatcaag actggtgccc
 1261 catgcagatc tgaacgtctg gcgaagtaca accagctcat gaggattgaa gaggagtgg
 1321 gggaggaggc tcgcttcgcg ggacacaact tccggaatcc cagtgtgctg tgacccctg
 1381 cttgcctgaa caccggaaca tcattctatt ctctggagc ctctttctg ctgtccgac
 1441 ccgccatagt taccttgata ccttgagccc caagtcaccc agaacacctc gactcacctg
 1501 ctctggctgt tcttggcttc cacaaccctt tgctgtctcc tactctctc cctctctggg
 1561 cccattttt ggggggattc cagtctgccc acttccctt ctattctctc taatcttaaa
 1621 aaaaaaaaaa aaatgacgac tagaagaagc ggtccacaga agaaccgcca gcgtccgaga
 1681 ggagcttcag gattggtgtg ttggggcggt taaagtggg ccacgtggca cgtgtgcttc
 1741 cctgccatcc atggtgtgtt aagccttgaa ctatgcacag agctggtgtt tggggagtgc
 1801 tggatgtgtg tgtgttcaca ttgtttgtt tgtttatcta ttttactt
 1861 tcagcctgtc agtcgtctgc cattactctt acagtctgaa agcatcagta tttcacgtg
 1921 gtccatttc aagatgacct aggatgggag gttttgttag catgggaaag gtcacagaaa
 1981 ggttagcaat ggttttcat ttggtgact aactgaagct cgttacttta cagaatgggg

Figure 6-B

2041 ctgtgtaccc ggggactttt ctctataac tctctcccc agccctagg tctcagtt
2101 tttctccgg ctgcaccaga gcgctgctc attccccgt gccatgtccc acagttgcca
2161 ctgtctctgt ggcttgaaa tgaccaccac tattaaagtc tgaaccacag tgcacacc

Figure 7

neuron-specific enolase mRNA

1 agtaaagggtg atggcaggaa ggcagcccc ggaggcaaag gctgggcacg cgggaggaga
 61 ggccagagtc agaggctgcg ggtatctcag atatgaagga aagatgagag aggctcagga
 121 agaggtaaga aaagacacaa gagaccagag aaggggagaag aattagagag ggaggcagag
 181 gaccgctgtc tctacagaca tagctggtag agactgggag gaagggatga accctgagcg
 241 catgaaggga aggagggtgc tgggtgtata tggaggatgt agctggggcc agggaaaaga
 301 tcctgcactg gggatctgaa gctggggaga acaggacacg ggggtggagag gcgaaaggag
 361 ggcagagtga agcagagaga ctgaggcctg gggatgtggg cattccggta gggcacacag
 421 ttactgtc ttctctttt ccaggaggcc aaagatgctg acgtcaagaa ctcataatac
 481 cccagtgggg accaccgcat tcatagccct gttacaagaa gtgggagatg ttctttttg
 541 tcccagactg gaaatccatt acatcccag gctcagggtc tgtggtggc atctctgtgt
 601 ggcttgttct gtgggcctac ctaaagtcct aagcacagct ctcaagcaga tccgaggcga
 661 ctaagatgct agtaggggtt gtctggagag aagagccgag gaggtgggct gtgatggatc
 721 agttcagctt tcaaataaaa aggcgtttt atattctgtg tcgagttcgt gaaccctgt
 781 ggtgggcttc tccatctgtc tgggttagta cctgccacta tactggaata aggagacgcc
 841 tgcttccctc gaggtagctg gacaaggta tgagcatccg tgtacttatg gggttgccag
 901 ctggtctctg gatcgcccgg gcccttcccc caccggttcg gtccccacc accaccgcg
 961 ctgtagctg cgtctccgcc tgcagctctt gactcatcgg ggccccggg tcacatgcgc
 1021 tcgctcggt ctataggcgc cgccccctgc ccacccccg cccgcgctgg gagccgcagc
 1081 cgccgccact cctgctctct ctgcgccgcc gccgtacca ccgccaccgc caccggctga
 1141 gtctgcagtc ctgagggtga gg

Figure 8-A

AB004291 Chick mRNA complete cds

1 acatccttct ctgcagcttc gtctctctc ctcttacca gcactttctc agtctctgt
 61 tcacccctgc ttaggaaga gtcacatgg cagttgagag gatccatgcc cgagagatcc
 121 tggattctcg tgggaacccc actgtagagg tggacctgta cacacacaaa ggcattgttc
 181 gaggagcggg cccagcggg gcatccactg gcatctatga agcattggag ctacgagata
 241 atgacaagtc acgtttctc ggaaaagggg tctgcaggc cgtggatcat atcaacagca
 301 ctgtcgcccc agctatctg ggctctggcc tctctgtgt agaccaagag aagatagaca
 361 atctgatgct tgagatggac ggcacagaga acaaatccaa gtttgggtcc aatgccattc
 421 tgggagtttc actggctgtg tgaaggcag gagctgcaga gaaggatgtc cccctgtacc
 481 ggcacattgc tgacctggca ggcaactccg atctatcct tctgtgcca gcttcaatg
 541 tgalcaatgg aggttcccat gcaggcaaca aattggcaat gcaggagttc atgacctac
 601 ctgtgggagc tgaagcttc cgcgatgcca tgcgcatgg agctgaagtc tatcacaatc
 661 tcaagagtgt tatcaaggag aagtatggca aggatgtac taatgtggg gacgagggag
 721 gatttctcc taacatcctg gaaaacagtg aagctctgga gctcctcaag gaagctattg
 781 acaaggctgg ctacacagac aagatcgtta tcggtatgga tgtggcagcc tctgagttct
 841 atcgagatgg caaatatgac ctgacttca agtccccaga tgaccaagc cgctacattt
 901 ctgcagatga gttgggtgac ctctatcaa gcttgtacg tgcttatcca gtgctttcca
 961 ttgaggatcc ctttgacaa galgactggg aggcctggc caagttcaca gccaacgttg
 1021 ggattcagat cgtgggagac gacctgacag tgacaaacc caagcgcat gagcgagctg
 1081 ttgaagagaa ggcattgcaac tgctctctgc taaagtcaa ccagattgga tctgtcacgg
 1141 aggccatcca agcctgtaag ttggcccagg agaattggctg ggggtgatg gtgagtcacc
 1201 gatctgggga gaccgaagac acttcattg ctgatctgt ctagcactg tgcactgggc
 1261 agataaagac tggtgcccc tgcaggctg aacgcctggc taaatacaac cagctcatga
 1321 ggattgagga ggagcttggc galgaagcac gcttctgtg acacaactt cgcaacccaa
 1381 gtgttcttg aacgttgtc cccaggcata gacaccctc agctcttcc cacatcacag
 1441 acttgaacc gtccttctc tcaactacc tttttgtct ctgtctcct tcttgccac
 1501 ctggttctc ctacactcaa agccccacga gttcaggtat cctggctag atataccag
 1561 gtgaagggtg aaaaagaggt ctgcaccctg tcccttgctt tgggatcata agcatttctg
 1621 gatttaggca tttgtgtct tttgtctg tgtgatctg aatcactctg ttacatat
 1681 agactatggg agcatgtgc ccagcgtgt tacgttgtat gccgaagcat gtgcagtga
 1741 catatgtcg tcggctggtg tgttggaca agtgcgcac ttgtagctgt gtttgaacga
 1801 gtgtcaccag tggctgcctc tcgttgtcg tgtgtgtagg tgtatgtgt ctggcctaca
 1861 gcattgtgt gcccggtgc atttgtctg agccgtggtg ggacctaagc gtcttctc
 1921 tccgttctga gcactgtcc gtgctgagct gtgctgtca gcagcttagt gttgagtga
 1981 gaattgctg tcactggccg tgtgtacgtg tctgtcagt ctctgggtta agcagctctg

Figure 8-B

2041 tgggatcttg tgggtcagca catagtactg tggggcaata tattaaaaca cagtcgtaaa
2101 aacacacatg ctctcatttg ctatcttga ccttcttctc tgttccatc cctctgcac
2161 tccttcactc tctcttctgc ccataatgc tgcttcacct tctagacagt caacgctcag
2221 caaagcaaca aactacagaa ccctaaactt aattaaaatg tatttcacac ctg

Figure 9-A

AF019973 Rat mRNA complete cds

1 cgccgccgcc gtcaccaccg ccaccgccac cggctgagtc tgcagtcctc gaggagatcc
 61 cagccatcat gtctatacag aagatctggg cccgagagat ctggactcc cgtgggaatc
 121 ccaccgtgga ggtggatctc catactgcc aaggctcttt ccgggctgca gtccccagtg
 181 gggcctccac tggcatctat gaggccctgg agctaaggga tggggacaaa cagcgttact
 241 taggcaaagg tgtctgaag gctgtggacc acatcaacag caccatcgca ccggccctca
 301 tcagctcagg cctctctgtg gtggagcagg agaagctgga caacctgatg ctggagtgg
 361 atgggactga gaacaaatcc aagtttgggg ccaatgccat cctgggtgtg tccctggccc
 421 tgtgcaaggc tggggcagcb gagaaggact tggccctcta tggccacatt gctcaactgg
 481 ctgggaactc cgacctatc ctgccgtgc cggcctttaa tggatcaac ggtggctctc
 541 atgtgggaa caagtggcc atgcaggagt tcatgatcct ccagtgggt gctgagagct
 601 ttcgggatgc catgcgactt ggggccgagg tgtaccacac actcaagggg gtcataagg
 661 acaagtacgg caaggatgcc actaatgtgg gggatgaagg cggcttggcc cccaatatcc
 721 tggagaacag cgaagcttg gagctggtga aggaagccat tgacaaggct ggctacacgg
 781 aaaagatggt gattggatg gatgtggctg cctctgagtt ttaccgcat ggcaaatacg
 841 acttggattt caagtctccc gctgacctt cccgatgat cactggggac cagcttgggg
 901 cactctacca ggactttgc cggaaactat ctgtggtctc cattgaagac ccattcgacc
 961 aggatgactg ggcagcttg tccaagtcca cagccaatgt cggcatccag atagtgggtg
 1021 atgacctgac ggtgaccaac cccaagcgca tcgagcgggc agtggaggag aaggcctgca
 1081 actgtttgct gctcaaggtc aaccagatcg gctcagtcac agaagccatc caagcgtgca
 1141 agctggccca ggagaacggc tgggggggta tggtagtca tcgctctgga gaaaccgagg
 1201 acacgttcat tgcagacctc gtagtgggac tgtgtacagg tcagatcaag actggtgccc
 1261 catgcagatc tgaacgtctg gcgaagtaca accagctcat gaggattgaa gaggagtgg
 1321 gggaggaggc tcgcttcgcg ggacacaact tccggaatcc cagtgtgctg tgacccctg
 1381 ctggcctgaa caccggaaca tcatctcatt ctctggagc ctctttctg ctgtcccgac
 1441 ccgccatagt taccttgata ccttgagccc caagtcaccc agaacacctc gactcacctg
 1501 ctctggctgt tcttggcttc cacaaccctt tgctgtctcc tactcttct cctctctggg
 1561 ccccatTTTT ggggggattc cagtctgccc actttccctt ctattctctc taatcttaaa
 1621 aaaaaaaaaa aaaaaatgac gactagaaga agcgggtcca cagaagaacc gccagcgtcc
 1681 gacaggagct tcaggattgg tgtgtgggg cgtttaaagt ggggccacgt ggcacgtgtg
 1741 ctccctgcc atccatggtg tgtlaagcct tgaactatgc acagagctgg tgttgggga
 1801 gtgctggatg tgtgtgtgtt cacatttgtt tgtttgttta ttatttatt cacttattta
 1861 ttctcagcc tgcagtcgt ctgccattac tcttacagtc tgaaagcadc agtattttca
 1921 cgtggttcca ttcaagatg acctaggatg ggaggttttg ttagcatggg aaaggtcaca
 1981 gaaaggtag caatggtttt tcatttgggt cactaactga agctcggtag ttacagaat

Figure 9-B

2041 ggggctgtgt acccggggac ttltctcta taactctctc cccagccct aggttctca
2101 gtcttttct cgggctgcac cagagcgctg cctattccc ccgtgccatg tcccacagt
2161 gccactgtct ctgtggcttt gaatatgacca ccactattaa agtctgaatc acagtgcaca
2221 cc

Figure 10

NSE

MSIQKIWAREILDSRGNPTVEVDLHTAK

1 ccaccaagg agatcccagc catcatgtct atacagaaga tctgggcccg agagatcttg
61 gactcccgtg ggaatccac cgtggagggtg gatctccata ctgccaaagg tgatgattag
121 cgtg

Figure 11

Rat neuron-specific enolase gene, 5' end.

```

1 agtaaagggtg atggcaggaa ggcagcccc ggaggcaaag gctgggcacg cgggaggaga
61 ggccagagtc agaggctgcg ggtatctcag atatgaagga aagatgagag aggctcagga
121 agaggtaaga aaagacacaa gagaccagag aagggagaag aattagagag ggaggcagag
181 gaccgctgtc tctacagaca tagctggtag agactgggag gaagggatga accctgagcg
241 catgaagga aggagggtgc tgggtgtata tggaggatgt agctggggcc agggaaaaga
301 tcctgcactg gggatctgaa gctggggaga acaggacacg gggtgagag gcgaaaggag
361 ggcagagtga agcagagaga ctgaggcctg gggatgtggg cattccgga gggcacacag
421 ttactgtc ttcttttt ccaggaggcc aaagatgctg acgtcaagaa ctcataatac
481 cccagtggg accaccgat tcatagccct gttacaagaa gtgggagatg ttcttttg
541 tccagactg gaaatccatt acatcccag gctcaggttc tgggtggtc atctctgtg
601 ggctgttct gtgggcctac ctaaagtct aagcacagct ctcaagcaga tccgaggcga
661 ctaagatgct agtaggggtt gtctggagag aagagccgag gaggtgggct gtgatggatc
721 agttcagctt tcaataaaaa aggcgtttt atattctgtg tcgagttcgt gaaccctgt
781 ggtgggctc tcatctgtc tgggttagta cctgccacta tactggaata aggagacgcc
841 tgctccctc gattggctg gacaaggta tgagcatccg tgtacttatg gggttgccag
901 ctgggtcctg gatgcccgg gccctcccc caccgttcg gtccccacc accaccgcg
961 ctgtacgtg cgtctccgc tcagctctt gactatcgg ggccccggg tcacatgcgc
1021 tcgtcggct ctataggcgc cccccctgc ccacccccg cccgcgctgg gagccgcagc
1081 cgccgccact cctgtctct ctgcgccgc gccgtacca ccgccaccgc caccggctga
1141 gtctgcagtc ctgagggtga gg

```

Figure 12

Rat neuron-specific enolase gene, exon 1.

MSIQKIWAREILDSRGNPTVEVDLHTAK

1 ccaccaagg agatcccagc catcatgtct atacagaaga tctgggcccg agagatcttg
61 gactcccggtg ggaatcccac cgtggagggtg gatctccata ctgccaagg tgatgattag
121 cggtg

Figure 13

neuron-specific enolase (intron 1)

```
1 gtgaggcccg tatcgggccg catcccctta ctctgtcctt gccgcgtcca ctccccgtta
61 tcctgggctt agcgcccccg ggtgtgtgtg tgtgtgtgtg tgtgtgtgtg tgtgtgtgtg
121 tgtgtgtgtg tgtgtgtgtg tgtgtgacgc tgcgtacctg tcacctgcct tccctggcac
181 cctccatccc cggccttcgc ggacagctcc cggctttctg gctgtcacct cctcctggtt
241 taggtaccag cttttctctc tctctctctc tctctctctc tctctctctc tctctctctc
301 tctctctctc cctgcacccg ctctctaac tccacgggtc caccctcgcc tgcacctctc
361 cccatgcctg tattcgtcca gggccgggcc gatttgttc ttaagttcga tgtctccgca
421 ggcgggcgct gttttctctg cacgttcatt ttgctttgc gttgcgaag ataccctctc
481 atccttcctt ggctgcttca gacttgctct aga
```

Figure 14

R.norvegicus gene encoding neuron-specific enolase, exon 2 and joined CDS.

MSIQKIWAREILDSRGNPTVEVDLHTAKGLFRAAVPSGASTGIY
 EALELRDGDQRYLGKGVLKAVDHINSTIAPALISSGLSVVEQEKLNDLMLELDGTEN
 KSKFGANAILGVSLAVCKAGAAEKDLPLYRHIAQLAGNSDLILPVPAFNIVINGGSHAG
 NKLAMQEFMILPVGAESFRDAMRLGAEVYHTLKGVIKDKYGKDATNVGDEGGFAPNIL
 ENSEALELVKEAIDKAGYTEKMOVIGMDVAASEFYRDGKYDLDFKSPADPSRCITGDQL
 GALYQDFVRNYPVVSIEDPFDQDDWAAWSKFTANVGIQIVGDDLTVTNPKRIERAVEE
 KACNCLLLKVNQIGSVTEAIQACKLAQENGWGVMSHRSGETEDTFIADLVVGLCTGQ
 IKTGAPCRSERLAKYNQLMRIEEELGEEARFAGHNFRNPSVL

1 gcgacccctt ctacatgtgt ctgattgca gctgcccct cccactccc taccactgc
 61 agtagacctc ttcccagcc ctccgcctc tggcccgcc cactggcctc aggtccacc
 121 cttctaagcc tcttatctgt ctcttcct ctgtccacc caaggagatc ccagccatca
 181 tgtctatata gaagatctgg gcccagaga tcttgactc ccgtgggaat cccaccgtgg
 241 aggtggatct ccatactgcc aaaggatg attagcgtgg actgtctgta gctcctaaa
 301 ccctacgcc ctaggctgg aaagggtga ggcttcctt caaatccagg catgggggtg
 361 ct

Figure 15

Rattus norvegicus enolase 2, gamma (Eno2), mRNA.

MSIQKIWAREILDSRGNPTVEVDLHTAKGLFRAAVPSGASTGIY
EAELELRDGDQRYLGKGV LKAVDHINSTIAPALISSGLSVVEQEKL DNLMLELDGTEN
KSKFGANAILGVSLAVCKAGAAEKDLPLYRHIAQLAGNSDLILPVPAFN VINGGSHAG
NKLAMQEFMILPVGAESFRDAMRLGAEVYHTLKGVIKDKYGKDATNVGDEGGFAPNIL
ENSEALELVKEAIDKAGYTEK MVIGMDVAASEFYRDGKYDLDFKSPADPSRCITGDQL
GALYQDFVRNYPVVSIEDPFDQDDWAAWSKFTANVG IQIVGDDLTVTNPKRIERA VEE
KACNCLLLKVNQIGSVTEAIQACKLAQENGWGV MVSHRSGETEDTFIADLVVGLCTGQ
IKTGAPCRSERLAKYNQLMRIEEELGEEARFAGHNFRNPSVL

Figure 16-A

Enolase

1 gccgccccct gccaccccc cgcccgcgct gggagccgca gccgcccga ctctgctct
 61 ctctgcgccc cgccgtcac caccgccacc gccaccggct gagtctgcag tctcgagga
 121 gatcccagcc atcatgtcta tacagaagat ctgggcccga gagatcttg actcccgagg
 181 gaatcccacc gtggaggtgg atcccatat tgccaaaggt ctttccggg ctgcagtccc
 241 cagtggggcc tccactggca tctatgaggc cctggagcta agggatgggg acaaacagcg
 301 ttacttaggc aaaggtgtcc tgaaggctgt ggaccacatc aacagcacca tcgcaccggc
 361 cctcatcagc tcaggcctct ctgtggtgga gcaggagaag ctggacaacc tgatgctgga
 421 gttgatggg actgagaaca aatccaagtt tggggccaat gccatcctgg gtgtgtccct
 481 ggccgtgtgc aaggctgggg cagccgagaa ggactgccc ctctatgcc acattgtca
 541 actggctggg aactccgacc tcactctgcc cgtgccggcc ttaatgtga tcaacggtgg
 601 ctctatgct gggaacaagt tggccatgca ggagttcatg atcctccag tgggtgctga
 661 gagcttccg gatgccatgc gactggggc cgaggtgtac cacacactca agggggctat
 721 caaggacaag tacggcaagg atgccaataa tgtgggggat gaaggcggct ttgccccaa
 781 tatcctggag aacagcgaag cttggagct ggtgaaggaa gccattgaca aggctggcta
 841 cacggaaaag atggtgattg gtatggatgt ggctgcctct gagtttacc gcgatggaa
 901 atacgacttg gattcaagt ctctgctga ccttccga tgcatctg gggaccagct
 961 tggggcactc taccaggact ttgcccga ctatcctgtg gtctccattg aagaccatt
 1021 cgaccaggat gactgggcag ctgtgtccaa gttcacagcc aatgtcggca tccagatagt
 1081 gggatgatgc ctgacggtga ccaaccccaa gcgcatcgag cgggcagtgg aggagaaggc
 1141 ctgcaactgt ttgctgtca aggtcaacca gatcggctca gtcacagaag ccatcaagc
 1201 gtgcaagctg gcccaggaga acggctgggg ggttatggtg agtcatcgct ctggagaaac
 1261 cgaggacacg ttattgcag acctcgtagt gggactgtgt acaggtcaga tcaagactgg
 1321 tgcccatgc agatctgaac gtctggcgaa gtacaaccag ctcatgagga ttgaagagga
 1381 gttgggggag gaggtcgtct tcgcgggaca caactccgg aatcccagtg tgctgtgacc
 1441 cctgctgc ctgaacaccg gaacatcatc tcattctct ggagcctct tctgtgtc
 1501 ccgaccgcc atagttacct tgatacctg agcccaagt caccagaac acctgactc
 1561 acctgctctg gctgttctg gcttcacaa ccccttgctg tctctactc ttctctct
 1621 ctggggccca ttttggggg gattccagta tgccacttt ccttctatt ctcttaac
 1681 ttaaaaaaa aaaaaaatg acgactagaa gaagcggctc acagaagaac cgccagcgtc
 1741 cgacaggagc ttcaggattg gtgtgtggg gcgtttaaag tggggccacg tggcacgtg
 1801 gcttccctgc catcatggt gtgttaagcc ttgaactatg cacagagctg gtgttggg
 1861 agtgctggat gtgtgtgtg tcacattgt ttgtttttt atttatttat tcactattt
 1921 atttctcagc ctgtcagtcg tctgccatta ctctacagt ctgaaagcat cagtatttc

Figure 16-B

1981 acgtggtcc attcaagat gacctaggat gggagggttt gtagcatgg gaaaggtcac
2041 agaaaggta gcaatgggtt ticatttggg gcactaactg aagctcggtā ctttacagaa
2101 tggggctgtg taccggggga ctttctcct ataactctct ccccagccc taggttcctc
2161 agtcttttc tccggctgca ccagagcgct gcctcattcc cccgtgcat gtcccacagt
2221 tgccactgtc tctgtggctt tgaaatgacc accactatta aagtctgaac cacagtgcac
2281 acca

Figure 17-A

Rattus norvegicus neuron specific enolase gene, 5' flanking region.

```

1  cggggatctc tgagttgag gccagcctgg tctgcagagt gattttcagg acagccaggg
61  ctacacagta gaagtctgtc ttggaaggaa ggaaggaagg agagaaagaa ggaaggaagg
121 aaggagagaa ggaaggaagg aaggaaaaca acttcaaggc cagatgctgt agcatatgcc
181 tatagtctag ggcttggaag tcaacggcgg caggagaatt gatgcaagtg tgagggagaa
241 gccagatcca tacggtgctg agttctgtgc cagccagggg tacacagtgg gattcagtca
301 acagcactaa cagtaacaaa aaaaccagat gtgtggctca tacctataat tccagcactc
361 aggaacccga ggcaggagga ttctgtgag attgaggcca gcctggactg cagagccaga
421 ctctgtcaca cccctcctcc acacacacac acacacacac acacacacac acacacacac
481 acacacacaa agatacacac acacagagac acacacacac agagacacac acacagagac
541 acacacgtgc gcgcacgcac acacacacaa tcacaacatg cacacacgtg ctgcacaca
601 cgcgcgcgca cgacacaca cacggaagga ggaaggagga aggaggagat ggatgaacac
661 atgcagggtc agagggattt ttcttaagc tcctctttc tgatggacaa ttcttcaat
721 tttttgtg gttctatcaa tcaaaccag ggctgtgtgc atgtgaaatc tgtaccccat
781 cactgagccc aacacaacgc cagtagagct cagagtgagg agtgctcctt gaggcccagg
841 geacctatgg agatcagtct geaataetta acactggatt cataaatgtt cgaaaccaca
901 gagttttgga aagaagaaca ttacaagact gagcttttta ttcaagctgg ggggtcaat
961 ccatccttag ctctgggttc ctactgaag gaagcactcc caccacacag taccacactc
1021 ttagtctga gctctcctc tgctcgccca atccttcaa cccctatgg tggtatggct
1081 gacacagaaa atgtctgtc ctgtatggga catttgcccc tcttctcaa atataagaca
1141 ggatgaggcc tagctttgc tgctccaaag tttaaaaga acacattgca cggcatttag
1201 ggactctaaa ggggtggagga ggaatgaggg aattgcatca tgccaaggct ggtcctcatc
1261 catcactgct tccagggtcc agagtggctt ccaggaggta ttcttacaaa ggaagccga
1321 tctgtagcta acactcagag cccattttcc tgcgttaacc cctcccgacc tcatatacag
1381 gagtaacatg atcagtgacc tgggggagct ggccaaactg cgggacctgc ccaagctgag
1441 ggccttggtg ctgctggaca acccctgtgc cgtatgagact gactaccgcc aggaggccct
1501 ggtgcagatg gcacacctag agcgcttaga caaagagtac tatgaggacg aggaccgggc
1561 agaagctgag gagatccgac agaggctgaa ggaggaacag gagcaagaac tcgacccgga
1621 ccaagacatg gaaccgtacc tccgccaac ttagtggctc ctctagcctg cagggacagt
1681 aaaggtgatg gcaggaaggc agcccccgga ggcaaaggct gggcacgcgg gaggagaggg
1741 cagagtcaga ggctgcgggt atctcagata tgaaggaaag atgagagagg ctacaggaaga
1801 ggtaagaaaa gacacaagag accagagaag ggagaagaat tagagaggga ggcagaggac
1861 cgctgtctct acagacatag ctggtagaga ctgggaggaa gggatgaacc ctgagcgcat
1921 gaaggggaagg aggtggctgg tggtatatgg aggatgtagc tggggccagg gaaaagatcc

```

Figure 17-B

1981 tgcactgggg atctgaagct ggggagaaca ggacacgggg tggagaggcg aaaggagggc
2041 agagtgaagc agagagactg aggcctgggg atgtgggcat tccggtaggg cacacagttc
2101 actgtcttc tcttttcca ggaggccaaa gatgctgacg tcaagaactc ataatacccc
2161 agtggggacc accgcattca tagccctgtt acaagaagtg ggagatgttc cttttgtcc
2221 cagactggaa atccattaca tccgaggct caggttctgt ggtggtcac tctgtgtggc
2281 ttgttctgt ggcctaccta aagtctaag cacagctctc aagcagatcc gaggcgacta
2341 agatgctagt aggggtgtc tggagagaag agccgaggag gtgggctgtg atggatcagt
2401 tcagcttca aataaaaagg cgttttata ttctgtgtcg agttcgtgaa cccctgtggt
2461 gggcttccc atctgtctgg gttagtagct gccactatac tggataaagg agacgcctgc
2521 tcccctcgag ttggctggac aaggttatga gcatccgtgt acttatgggg ttgccagctt
2581 ggtcctggat cgcccgggcc ctccccac ccgttcggtt cccaccacc acccgcgctc
2641 gtacgtcgt ctccgctgc agctctgac tcatggggc ccccggtca catgcgctcg
2701 ctggctcta taggc

Figure 18-A

R.norvegicus gene encoding neuron-specific enolase, exons 8-12.

```

1 gaattctact ctgtctccc taggtagcct ctctccacag accctattca cacaccccct
61 ccaatagtc cctccttcc actctggctt tttcacccg ccttccttca cacctatctc
121 tctacttaa aatctcactg gatctgtct tagctttgga gctggtgaag gaagccattg
181 acaaggctgg ctacacggaa aagatggtga ttggtatgga tgtggctgcc tctgagttt
241 accgcgatgg caaatacgac ttggatttca agtctcctgc tgacccttcc cgatgcatca
301 ctggggacca gcttggggca ctctaccagg actttgtccg gaactatcct ggtgagagtg
361 agggattctg ggagatagga aagggaaaga acggagatag gcagaggtga actttatggg
421 gtgcagagtc tggggcctgg tgacgtcctg aagcaggag aagaggcagt aggttctac
481 aatgcagacc ttgagactg tgcatgcaac tgtgactggg ctctccgcc tegtctcaga
541 ccttgggctc tgagagctac ttgagtccta gggaaagcac tgggaaggagt cggggatggg
601 aagaacatga gtggaggtga cagaaaagtg ccaggcttta gtatccttga ttgatgaaga
661 tagatactga atggagtcag cgcggctgcc tggggcgggg caggaggggg atcactgagg
721 tacagagtct ccacagctac aaagggcctc catcctgctt cgtggaggca gttggcctcc
781 atcatagcag gcttctctgg gaagaaccag cccctcttcc acaccctctg cagtggctc
841 cattgaagac ccattcgacc aggatgactg ggcagcttgg tccaagtca cagccaatgt
901 cggcatccag atagtgggtg atgacctgac ggtgaccaac cccaagcgca tcgagcgggc
961 agtggaggag aaggcctgca actgtttgct gctcaaggtc aaccagatcg gctcagtcac
1021 agaagccatc caagcgtgag tggcttctgg cctctccca cttgtgtct tcaggactcc
1081 tcttgagagc cccctctagc tggattctgc cctggaactc tggtaacac tggctaccct
1141 tcacactgtt ctacttcta gtcttctat tcttcacgat ctgccctcac gccctaagt
1201 cacctccac cagggtcatt cctgacatag atcaagcccg gggctgggag ggaagagctg
1261 tgcttcaggg caggtcagt ctggtgtctg ctccaggtgc aagctggccc aggagaacgg
1321 ctgggggggt atggtgagtc atcgctctgg agaaaccgag gacacgttca ttgcagacct
1381 cgtagtggga ctgtgtacag gtcagggtgag tagagccagt ccgagggatc aggagagatc
1441 ttgtggggt tagtgggtc tgggccagg tagttactgt cctgccaaaa aaaaatctga
1501 gtcagaaaag ttcaagagt agaagtctgg ccaggcgtag tggtcacac cttaatccc
1561 agcactcagg aggcagaggc aggtggatct ctgtgagttt aaggccagtt tggttatat
1621 agtgagtttc aggacagtca gggctacact gagggactcc ttaacaaacg aagacgtgaa
1681 aagagtagaa gtccgagct ggtgagatgg ccaggaggt tcaagtgcc ggtgctaagc
1741 ctgactgcta gcttcagttt gattcatggg acccacaggt tagaaggaga gaaccaactc
1801 ccaccagttg tctctgacc ttccaatgca caccaggcaa gagcagaccc acagacatgc
1861 atacagacat gaaataaagt attaattttt ataattaatt aattaataat taatagatac
1921 aatgcagat gtttcagggc tggaggctta gctcagttgc aggtacttcc cacatgcgca

```

Figure 18-B

1981 agaccctggg ttccattaaa aaaaggggag gggggaggta ggggtatgacc tgcattgcctt
 2041 tagtcctagc actcaggaga cagaggaagg aggatttcta tgaattcacc agcctagtct
 2101 acttagcgag ttctaggacg gctatagtaa aattctgtcc caaaaaaca aaaaatagac
 2161 ctggacttgg ggtcacatcc tttagcccca acatttcggg aagtagaagc aggaggatca
 2221 ggagttcagg gctaacctgt cccatttgag gccaaacttc ataaaattgt ctcaaataa
 2281 aaaaaagtgt gtgtgtgtgt gtgtgtgtgt gtgtgtgtgt gtgtgtgtgt gtgtgtgtt
 2341 gggggtaaag gggagcaagg ttgtctatc aggtgaagga gatctttaa cggcatatct
 2401 tctggaatgt ttcatgcaa gactggtgcc ccatgcagat ctgaacgtct ggcaagtagc
 2461 aaccagctca tgaggtgagg agggccctg aggaacaaga acccgagacc cagagctgaa
 2521 caccctatta ggccaccatt ccatctctg catccaggag ctggatagta ctggctgcc
 2581 agaaaatggt ttgtttagt gggttcaagg gtggtgtgac tgacagatca ctacgtacc
 2641 tgaaaaccag ggaatgttca cctggggca gtctcaagg gaggagcctg gcgggatcca
 2701 gagagaaaag cagatctct ctcctctcc tccctctcc catgctccat tccggtcat
 2761 cgtcaggatt gaagaggagt tgggggagga ggctcgctc gcgggacaca actccggaa
 2821 tccagtgtg ctgtgacccc ctgctgcct gaacaccgga acatcatctc attctcctg
 2881 agcctcttc ttgctgtccc gaccgccat agttacctg ataccttgag cccaagtca
 2941 cccagaacac ctgcactcac ctgctctggc tgttctggc ttccacaacc cctgtgtgc
 3001 tctactctt cctctctct gggcccccatt ttgggggga ttccagtatg cccacttcc
 3061 ctctattct ctctaattt aaaaaaaaa aaaaatgac gactagaaga agcggtcac
 3121 agaagaaccg ccagcgtccg acaggagctt caggattggt gtgttggggc gtttaaagt
 3181 gggccacgtg gcacgtgtc ttccctgcc tccatggtgt gttaaacct gaactatga
 3241 cagagctggt gtttggggag tgctggatgt gtgtgtgtc acattgttt gttgtttat
 3301 ttattattc acttatttat ttctcagcct gtcagctgc tgccattact ctacagtct
 3361 gaaagcatca gtattttcac gtggttccat ttcaagatga cctaggatgg gaggtttgt
 3421 tagcatggga aaggtcacag aaaggttagc aatggtttt catttggtgc actaactgaa
 3481 gctcgttact ttacagaatg gggctgtga cccggggact ttctctat aactctctc
 3541 cccagcccta ggttctcag tcttttctc cggctgcacc agagcgtgc ctattcccc
 3601 cgtgccatgt cccacagtgt cactgtctc tgtgctttg aaatgaccac cactattaaa
 3661 gtctgaacca cagtgcacac caccctgtg ctgaggactt ttactcttg ctccatagta
 3721 gaggaggaag agaaaggact ggatattggt gaacctagag agcagatctg gggagggcaa
 3781 gtcactgaac tcatgaccaa gttgcagca ttgctggcta tgtgaaccc atggtaaaaa
 3841 atccccaaa gacaggggtt ctctgtgaag cctggctgt cctggagctc accctgtaga
 3901 ccatgctggc ccaaacctat tagtgattag cctgcctctg cctctgggtg ctgggattaa
 3961 aattgtgtac tgccacacct gacaaacta aggactctta acctgtgata caggagtccc
 4021 tcaaacaatca gggattgagt gtatctggag tgaggaataa ggcattctg gttccaaaag

Figure 18-C

4081 tctttgaggg aagaagggat aaagtggtag actagcattc ctgtacgggt cctcaacaga
4141 attc

Figure 19-A

R. norvegicus gene encoding neuron-specific enolase, exons 3-7.

```

1  ggccccggag tgctcccc ttctctgtc gcgtgtcttt ttccgaggtc tttccgggc
61  tgcagtcccc agtggggcct cactggcat ctatgaggcc ctggagctaa gggatgggga
121  caaacagcgt tacttaggca aagggtatga ctctctctc ccagcaggcc ccagtcccct
181  agatgccttg cctgcctct cctcagtct caccctctct cctggcctga gcagcccctt
241  tccctttctc taggtgtcct gaaggctgtg gaccacatca acagcaccat cgcaccggcc
301  ctcatcagct cagttaggac cgctctttcc tgggggtggc tgctaggcca gaatcttaca
361  agaaaccttg ggtccaggga ggaacgaggg gagggcaaaaa caaacaacaa aacaacaaaa
421  caactccaca cacacacaca cccctccct cccaccccc cccccactct ttaggaagtt
481  gtggttaca atgcaagggt tgggaaaata cttctactg ccctgttga aattcaagat
541  cccaaaagct gtagggcag gtagctggca gtgcctgtc agacataagg ctttgttga
601  atggaccctc agtcttaggc tccagcctcc atcttgactc tgggtaatgg gggctctgca
661  cagggcctct ctgtgttga gcaggagaag ctggacaacc tgatgttga gttgatggg
721  actgagaaca aatgtaagta gggagggcag gtggaatagc taagcacaga gaactgagga
781  gccatctggg gacacttga ctgtcagaga acctctctct cctcaccca aagccactgt
841  agtgtgtgtg tgtgtgtgtg tgtgtgtgtg tgtgacacta gacaggagga
901  aaaacttccc taaagcagga tgacaggggc tggcatgggg tagtctgggg gatgcttagg
961  aagaggtgag gccttccctt actgtcctc tctgtccca accccactgc ttttgggagg
1021  tgcagggtgg ggagcctct ttactggatt ttctgggga gtataggtag gggcaggggc
1081  tacaagagag ggggacattt ttactggcg ccttctctg tgatctctca gccaaatttg
1141  gggccaatgc catctgggt gtgtccctgg ccgtgtgcaa ggctggggca gccgagaagg
1201  actgcccct ctatgccac attgtcaac tggctgggaa ctccgacctc atctgcccg
1261  tgccggtgag cattgccctt gcctagccct tccaggggag gagggagaat gcaaccaagt
1321  gagggatgaa gggaggaagg cgaacagaca gcagctaaag agaaaggacg gtagtgaga
1381  actacctggc ggctggggat ctgaggttg cattctcgg gcaggaggaa aggctctgac
1441  tcgtctgacc atctgtggct cccaggcct ttaatgtgat caacgggtgc tctcatgtg
1501  ggaacaagtt ggcatgcag gatttcatga tcttccagt ggggtctgag agcttctggg
1561  atgcatgag acttggggcc gaggtgtacc acacactcaa gggggctac aaggacaagt
1621  acggcaagga tgccactaat gtgggggatg aaggcggctt tgccccaat atctggaga
1681  acagcgaagg tgaggcccgg agcccttacc ccagctgaat ctcccgttag gaaagctggc
1741  acagcgggt ttttgaact ctgaaaatct caaatggtag tagcccctag ggtgagctcc
1801  cggggccttc ctatttcca catagaccct ggagctcagt ctgtgacctg ctgagctaaa
1861  cctgttcat aggtcctcac cagactgtg agaatttgg taagtgtct gggtaggtc
1921  cattcatcc ttaaggaca cagtctcagt tagatgacat attctatgt ccaggggggt

```


Figure 20

R.norvegicus gene encoding neuron-specific enolase, exon 1.

```

1 ctgcagggac agtaaagggtg atggcaggaa ggcagcccc ggaggcaaag gctgggcacg
61 cgggaggaga ggccagagtc agaggctgcg ggtatctcag atatgaagga aagatgagag
121 aggcacagga agaggtgaaga aaagacacaa gagaccagag aagggagaag aattagagag
181 ggaggcagag gaccgctgtc tctacagaca tagctggtag agactgggag gaagggatga
241 accctgagcg catgaaggga aggaggtggc tgggtgtata tggaggatgt agctggggcc
301 agggaaaaga tctgcactg gggatctgaa gctggggaga acaggacacg ggggtggagag
361 gcgaaaggag ggcagagtga agcagagaga ctgaggcctg gggatgtggg cattccgta
421 ggccacacag ttacttgtc ttctctttt ccaggaggcc aaagatgctg acgtcaagaa
481 ctcataatac cccagtggg accaccgcat tcatagccct gttacaagaa gtgggagatg
541 ttctctttt tccagactg gaaatccatt acatcccag gctcaggttc tgggtgttc
601 atctctgtgt ggctgttct gtgggcctac ctaaagtcct aagcacagct ctcaagcaga
661 tccgaggcga ctaagatgct agtaggggtt gtctggagag aagagccgag gaggtgggct
721 gtgatggatc agttcagctt tcaaataaaa aggcgtttt atattctgtg tcgagttcgt
781 gaacccctgt ggtgggcttc tccatctgtc tgggttagta cctgccacta tactggaata
841 aggagacgcc tgctccctc gatttggtc gacaaggta tgagcatccg tgtacttatg
901 ggggtgccag ctgggtcctg gatcgcccg gccctcccc caccggttcg gttccccacc
961 accacccgcg ctgtacgtg cgtctccgccc tgcagctctt gactcatcgg ggcccccg
1021 tcacatgcgc tcgtcggct ctataggcgc cggccctgc ccaccccccg ccgcgctgg
1081 gagccgcagc cggccgact cctgtctct ctgcgcccgc gccgtacca ccgccaccg
1141 caccggctga gtctgcagtc ctgaggtga ggcccgtatc ggccctccct tactctgtcc
1201 ttgccgcgtc cactccccgt tatctgggct tagcggcccc ggtgtgtgt gtgtgtgt
1261 gtgtgtgtgt gtgtgtgtgt gtgtgtgtgt gtgtgtgtgt gtgtgtgtgt tccgcg

```

Figure 21

Human NSE

1 MSIEKIWARE ILDSRGNPTV EVDLYTAKGL FRAAVPSGAS TGIYEALRLR DGDQRYLKG
61 GVLKAVDHIN STIAPALISS GLSVVEQEKL DNLMLELDGT ENKSKFGANA ILGVSLAVCK
121 AGAAERELPL YRHIAQLAGN SDLILPVPAF NVINGGSHAG NKLAMQEFMI LPVGAESFRD
181 AMRLGAEVYH TLKGVKDKY GKDATNVGDE GGFAPNILEN SEALELVKEA IDKAGYTEKI
241 VIGMDVAASE FYRDGKYDLD FKSPTDPSRY ITGDQLGALY QDFVRDYPVV SIEDPFDQDD
301 WAAWSKFTAN VGIQIVGDDL TVTNPKRIER AVEEKACNCL LLKVNQIGSV TEAIQACKLA
361 QENGWGVMSV HRSGETEDTF IADLVVGLCT GQIKTGAPCR SERLAKYNQL MRIEEEELGDE
421 ARFAGHNFRN PSVL

Figure 22

Rat NSE

1 MSIQKIWARE ILDSRGNPTV EVDLHTAKGL FRAAVPSGAS TGIYEALRLR DGDKQRYLGK
61 GVLKAVDHIN STIAPALISS GLSVVEQEKL DNLMLELDGT ENKSKFGANA ILGVSLAVCK
121 AGAAEKDLPL YRHIAQLAGN SDLILPVPAF NVINGGSHAG NKLAMQEFMI LPVGAESFRD
181 AMRLGAEVYH TLKGVKDKY GKDATNVGDE GGFAPNILEN SEALELVKEA IDKAGYTEKM
241 VIGMDVAASE FYRDGKYDLD FKSPADPSRC ITGDQLGALY QDFVRNYPVV SIEDPFDQDD
301 WAAWSKFTAN VGIQIVGDDL TVTNPKRIER AVEEKACNCL LLKVNQIGSV TEAIQACKLA
361 QENGWGVMS HRSGETEDTF IADLVVGLCT GQIKTGAPCR SERLAKYNQL MRIEEEELGEE
421 ARFAGHNFRN PSVL

Figure 23

Human NSE

1 MSIEKIWARE ILDSRGNPTV EVDLYTAKGL FRAAVPSGAS TGIYEALRLR DGDQRYLGK
61 GVLKAVDHIN STIAPALISS GLSVVEQEKL DNLMLELDGT ENKSKFGANA ILGVSLAVCK
121 AGAAERELPL YRHIAQLAGN SDLILPVPAF NVINGGSHAG NKLAMQEFMI LPVGAESFRD
181 AMRLGAEVYH TLKGVKDKY GKDATNVGDE GGFAPNILEN SEALELVKEA IDKAGYTEKI
241 VIGMDVAASE FYRDGKYDLD FKSPTDPSRY ITGDQLGALY QDFVRDYPVV SIEDPFDQDD
301 WAAWSKFTAN VGIQIVGDDL TVTNPKRIER AVEEKACNCL LLKVNQIGSV TEAIQACKLA
361 QENGWGVMSV HRSGETEDTF IADLVVGLCT GQIKTGAPCR SERLAKYNQL MRIEEEELGDE
421 ARFAGHNFRN PSVL

Figure 24

Chick NSE

1 MAVERIHARE ILDSRGNPTV EVDLYTHKGM FRAAVPSGAS TGIYEALRLR DNDKSRFLGK
61 GVLQAVDHIN STVAPAIVGS GLSVVDQEKI DNLMLEMDGT ENKSKFGANA ILGVSLAVCK
121 AGAAEKDVPL YRHIADLAGN SDLILPVPAF NVINGGSHAG NKLAMQEFMI LPVGAESFRD
181 AMRIGAEVYH NLKSVIKEKY GKDATNVGDE GGFAPNILEN SEALELLKEA IDKAGYTDKI
241 VIGMDVAASE FYRDGKYDLD FKSPDDPSRY ISADELGDLY QSFVRAYPVL SIEDPFDQDD
301 WEAWSKFTAN VGIQIVGDDL TVTNPKRIER AVEEKACNCL LLKVNQIGSV TEAIQACKLA
361 QENGWGVMS HRSGETEDTF IADLVVALCT GQIKTGAPCR SERLAKYNQL MRIEEEELGDE
421 ARFAGHNFRN PSVL